IN THE CLAIMS

Please amend the claims, as follows:

1. (Currently Amended) A ~~computer~~ computerized method of at least one of designing, constructing, and adjusting an orthodic, said method comprising ~~the steps of~~:

i) providing pressure and acceleration sensors;

ii) mounting said sensors in a ~~knee-enclosing~~ joint-enclosing device;

iii) transmitting the data produced by said sensors during actual operation of said ~~knee-enclosing~~ joint-enclosing device worn by a specific individual;

iv) receiving said sensor signals for ~~subsequent~~ analysis by a computer;

v) creating a stress-and-acceleration map based on said sensor-based data; and

vi) creating a virtual orthodic (model) for support and comfort based on ~~step v)~~ said stress-and-acceleration map~~; and~~

~~vii) constructing a physical orthodic based on a design provided by the virtual orthodic~~.

2. (Currently amended) A method according to claim 1, ~~comprising a step of~~ further comprising:

using at least one of temperature, moisture, and skin conductivity sensors which are correlated with a worn orthodic.

3. (Currently amended) A method according to claim 1, further comprising: ~~a step of~~

using interpolation techniques to completely map stresses and accelerations experienced by a knee over a period of time.

4. (Currently amended) A method according to claim 3, further comprising: ~~a step of~~

updating the virtual orthodic model using the ~~interpolating map~~ interpolation data to obtain an interpolated map.

5. (Currently amended) A method according to claim 4, further comprising: ~~a step of~~

using the interpolated map to directly design the virtual orthodic in an optimal manner.

6. (Currently amended) A method according to claim 1, further comprising: ~~a step of~~ using non-linear techniques to model an optimal orthodic.

7. (Currently amended) A method according to claim 6, ~~comprising a step of employing~~ wherein neural networks is used as a part of the modeling technique.

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8. (Currently amended) A method according to claim 7, ~~comprising a step of employing~~ wherein regression is used as a part of the modeling technique.

9. (Currently amended) A method according to claim 7, ~~comprising a step of employing~~ wherein expert systems or fuzzy logic is used as a part of the modeling technique.

10. (Currently amended) A method according to claim 1, further comprising: ~~the step of~~ optimizing the design of the virtual orthodic subject to internal or external constraints.

11. (Currently amended) A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to ~~perform method steps for providing an interactive supply chain management database~~ at least one of design, construct, and adjust an orthodic for an individual, the method comprising ~~the steps of~~:

~~i) providing pressure and acceleration sensors;~~

~~ii) mounting said sensors in a knee-enclosing device;~~

~~iii) transmitting the data produced by said sensors during actual operation of said knee-enclosing device worn by a specific individual;~~

~~iv)~~ receiving ~~said~~ sensor ~~signals for subsequent analysis by a computer~~ data from pressure and acceleration sensors mounted on a joint-enclosing device worn by a user;

~~v)~~ creating a stress-and-acceleration map based on said ~~sensor-based~~ data; and

~~vi)~~ creating a virtual orthodic (model) ~~for support and comfort~~ based on ~~step v)~~ said stress-and-acceleration map~~; and~~

~~vii) constructing a physical orthodic based on a design provided by the virtual orthodic~~.

12. (New) The method of claim 1, further comprising at least one of:

constructing a physical orthodic based on the virtual orthodic; and

adjusting a physical orthodic based on the virtual orthodic.

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13. (New) The program storage device of claim 11, said method further comprising:

using data from the virtual orthodic to construct a physical orthodic.

14. (New) A computerized method of at least one of designing, constructing, and adjusting an orthodic, said method comprising:

receiving, in a computer, data from pressure and acceleration sensors mounted on a joint-enclosing device worn by a user; and

generating a stress-and-acceleration map from said data.

15. (New) The computerized method of claim 14, further comprising:

calculating a virtual orthodic model from said stress-and-acceleration map.

16. (New) The computerized method of claim 15, further comprising:

using data from said virtual orthodic model as a basis to at least one of construct and adjust a physical orthodic for a user.

17. (New) The computerized method of claim 14, further comprising:

receiving data from at least one of temperature, moisture, and skin conductivity sensors mounted on said joint-enclosed device.

18. (New) The computerized method of claim 14, wherein said data is received from a recording device associated with said sensors.

19. (New) The computerized method of claim 18, wherein said recording device is used to record said data during a period of use by a user of said joint-enclosing device, said method further comprising:

downloading said recorded data into said computer for analysis.

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20. (New) The computerized method of claim 15, wherein said calculating a virtual orthodic comprises using a neural network.

21. (New) A method of at least one of designing, constructing, and adjusting an orthodic, said method comprising:

receiving, in a computer, dynamic data from at least one sensor mounted on a joint-enclosing device worn by a user; and

using said dynamic data to at least one of design, construct, and adjust an orthodic device.